REMARKS/ARGUMENTS

I. Introduction:

Claims 1, 5, 7-14, 16, 30, 38, 39-42, 46, 47, 50, 53, 57, 59, 60, 62, 64, 68, 71-73, 75, and 77 are amended, claims 34-37, 58, and 76 are canceled, and new claim 78 is added herein. With entry of this amendment, claims 1-33, 38-57, 59-75, and 77-78 will be pending.

II. Claim Rejections – 35 U.S.C. 112:

Claims 1 and 16 have been amended to replace "second counter electrode" with "counter electrode".

Claim 5 has been amended to clarify that the "at least one electrolytic surface" is the at least one electrolytic surface of the first working electrode.

Claim 38 has been amended to replace "the rotating disk electrode" with "the working electrode".

Claim 57 has been amended to replace "body" with "tubular member".

Claims 1, 5, 16, 38, 57, as amended, are believed to comply with the requirements of 35 U.S.C. 112.

III. Allowable Subject Matter in Office Action:

Applicants acknowledge the allowance of claims 26-29, and the subject matter of claims 7-10, 13, 39, 40, 42, 46-53, 55, 58-63, 71, 72, 75, and 76.

Claim 1 has been amended to include the limitations of dependent claim 13. Claims 7, 9, and 10 have been amended to include original independent base claim 1. Accordingly, claims 1, 7, 9, and 10 are submitted to be in proper form for allowance.

Claims 2-6, depending from claim 1, claims 8 and 11-13, depending from claim 7, and claims 14-15, depending from claim 9, are also submitted to be in proper form for allowance.

New claim 78 includes the limitations of original claim 38 and "performing a process on an exposed end of the insert to form the electrolytic surface, the electrolytic surface having a different composition than the insert". This new limitation generally describes processes of dependent claims 39, 40, and 42. At pages 33-35 of the Office Action dated March 23, 2007, the Examiner describes the reasons for allowance of claims 39, 40, 42. The Examiner notes that the Stojanovic reference describes machining an electrode face with emery paper to remove a slotted end-piece. A process is not performed that results in an electrolytic surface having a different composition than the insert, as set forth in claim 78. Accordingly, claim 78 and claims 39-42 depending therefrom, are submitted as patentable over the cited references.

Claim 38 has been amended to clarify that the external coating is applied to the body using a chemical process. As amended, claim 38 generally describes the process of dependent claims 46, 47, 50, and 53. For example, the chemical process may include subjecting the body to chemical vapor deposition (claim 46), growing a boron nitride layer (claim 47), anodizing external surfaces of the body (claim 50), or applying Silcosteel® (claim 53). In contrast to applicants' invention, Stojanovic describes an insulating sheath that is screwed over a ring assembly (see, Examiner's reasons for allowance of claims 46, 47, 50, and 53 at pages 35-37). Accordingly, claim 38 and claims 43-56 depending therefrom, are believed to be in proper form for allowance.

Claim 57 has been amended to include the limitations of dependent claim 58. Dependent claims 60, 62, 71, and 72 have been amended to include the limitations of their independent base claim 57. Accordingly claims 57, 60, 62, 71, and 72 along with claims 59, 63, 69, and 70, depending from claim 57, claims 61, and 64-67

depending from claim 60, and claim 68 depending from claim 62, are believed to be in proper form for allowance.

Claim 73 has been amended to include the limitations of dependent claim 76. Dependent claim 75 has been amended to include the limitations of independent base claim 73. Accordingly, claims 73 and 75, as well as claim 74 depending from claim 73 and claim 77 depending from claim 75 are believed to be in proper form for allowance.

IV. Claims 16-25:

Claim 16 has been amended to specify that the drive system is mechanically coupled by a common drive shaft to the first working electrode or a portion of the electrode of each of the electrochemical cells for simultaneously effecting relative motion between the electrolytic surface of the electrode and a bulk portion of the liquidus electrolyte. (See, e.g., Fig. 11 and page 23, line 12 – page 24, line 6 of the specification).

U.S. Patent No. 6,621,263 (Al-Janabi et al.) discloses a high-speed corrosion-resistant rotating cylinder electrode system. Fig. 10 illustrates a combination of test devices. As described at col. 5, lines 56-65, cell body 12, magnetic drive 78, and motor 80 are supported on an overall base 82 by four legs. Each test device includes its own drive motor 80 coupled to its respective electrode 58 through an individual shaft 62 (Figs. 1 and 10). Al-Janabi et al. do not disclose a drive system coupled by a common shaft to each electrode of a plurality of electromechanical cells.

U.S. Patent No. 6,884,333 (Landau) is directed to an electrochemical system for analyzing performance and properties of electrolytic solutions. In rejecting the claims, the Examiner refers to a rotating disk electrode 60 and ring electrode 62 (see Figs. 5A and 5B and col. 13, lines 20-41). There is no disclosure in Landau of a drive system coupled by a common drive shaft to a plurality of electrodes.

Accordingly, claim 16 is submitted as not anticipated by Al-Janabi et al. or Landau.

Claims 17-25, depending either directly or indirectly from claim 16, are submitted as patentable for at least the same reasons as claim 16.

V. Claims 30-33:

Claim 30 is directed to a parallel electrochemical apparatus for screening a plurality of materials and includes, inter alia, electrochemical cells and electrodes, wherein each of the cells is moveable independent from the other cells to vary an insertion depth of the electrode within the cavity.

Figs. 8 and 9 of Al-Janabi et al. illustrate a shaft of the test device and a top shaft seal, respectively. The top cap 64 includes a threaded aperture 70 that threads onto the upper portion of the system shaft 62. The system shaft 62 is rotated by a magnetic drive positioned below the base 40 of the cell body 12 and engaging the motor 80 (see Figs. 8 and 9, and col. 5, lines 13-49). The cell body 12, magnetic drive 78, and motor 80 are all supported on an overall base 82 by four legs (not shown) including x-y-z positioning components extending from a mount plate 84 (see col. 5, lines 56-65). The legs thus support the mount plate 84 on which the test device is mounted. Movement of the legs repositions the entire test device and does not vary an insertion depth of the electrode within the cell.

U.S. Patent No. 6,251,245 (Satsutani et al.) discloses an apparatus for detecting and analyzing positive ions and negative ions in a liquid. The apparatus includes a metal signal detecting box A containing a single device comprising a sensor 5 and a container C for holding a sample of water to be measured. A hoisting and lowering bench 6 moves the container up and down by rotating a knob 6a. The hoisting and lowering bench is used to move the container to and from the sensor section. There is no indication in Satsutani et al. of an impact of the insertion depth

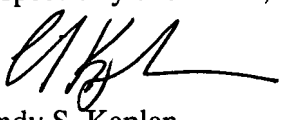
of the sensor in the water, thus the hoisting and lowering device is simply used to position the sensor within water without precision as to the insertion depth of the sensor. Claim 30 has been amended to specify that the position of each of the plurality of electrochemical cells is controlled by a processor. This allows for precise insertion of each electrode at a specified depth within a liquidus electrolyte.

Accordingly, claim 30 and claims 31-33, depending either directly or indirectly therefrom, are submitted as patentable over Al-Janabi et al. and Satsutani et al.

VI. Conclusion:

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,



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